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ABSTRACT

The achievement of students at the Science Academy of Austin, an academy located within a high school, is profiled. A study was conducted to compare Science Academy students to other high-achieving students in the Austin (Texas) Independent School District (AISD) and to predict levels of achievement. The results of this study indicate that Academy students exceeded the predicted gains in reading and mathematics at almost every grade level, with the exception of 10th-grade comprehension scores that were at the predicted level. Thirty-five percent of the graduating seniors at the Science Academy were recognized for academic excellence. The Science Academy has been phased in, one grade at a time, with enrollment limited to approximately 200 students. Enrollment of female students, at 45%, is approaching the distribution in the entire district. Recruitment and retention of minority students, particularly Blacks, are issues that confront the Academy. Hispanic enrollment has shown the greatest growth among ethnic groups. Science Academy graduates have been accepted into over 60 colleges nationwide. In 1989-90, the Science Academy had a much higher proportion (97%) of gifted students (those in honors courses), and fewer lower income students (11%) than did the AISD as a whole. The Science Academy had no limited English proficient or special education students during these years. Eight figures and three tables are included. (SLD)

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FEEDBACK: PROGRESS REPORT ON THE SCIENCE ACADEMY OF AUSTIN

Publication No. 90.09

Lydia Williams-Robertson

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FEEDBACK

Progress Report On The Science Academy of Austin

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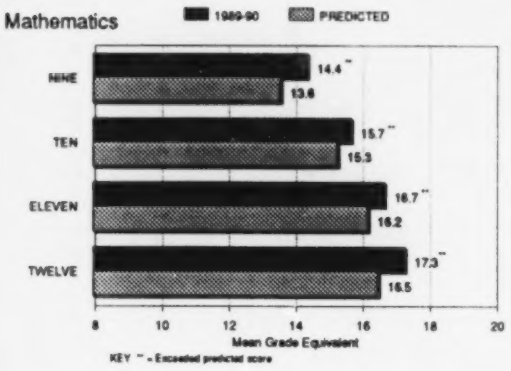
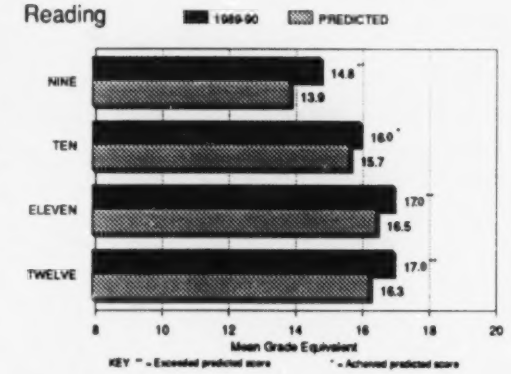
Science Academy Students Exceed Predicted Gains

According to the Report on School Effectiveness (ROSE), an analysis that compares students to other high-achieving students districtwide and predicts levels of achievement, Science Academy students exceeded the gains in mathematics and reading comprehension predicted for them at almost all grade levels. The single exception was at tenth grade where students' reading comprehension scores were at predicted levels. Reading comprehension and mathematics grade equivalents are illustrated below.



Mathematics	9	10	11	12
Number of Students	175	130	113	81
1989 Grade Equivalent	10.2	14.3	16.0	17.0
1990 Grade Equivalent	14.4	15.7	16.7	17.3
Gain	4.1	1.4	0.7	0.3
Predicted Score	13.6	15.3	16.2	16.5
Over/Under Actual Score	0.8	0.4	0.4	0.6
Significance	+	+	+	+

Key
+: Exceeded Predicted Score
=: Achieved Predicted Score



Reading	9	10	11	12
Number of Students	172	130	113	81
1989 Grade Equivalent	10.7	14.7	16.2	16.9
1990 Grade Equivalent	14.8	16.0	17.0	17.0
Gain	4.1	1.3	0.8	0.1
Predicted Score	13.9	15.7	16.5	16.3
Over/Under Actual Score	0.9	0.2	0.6	0.5
Significance	+	=	+	+

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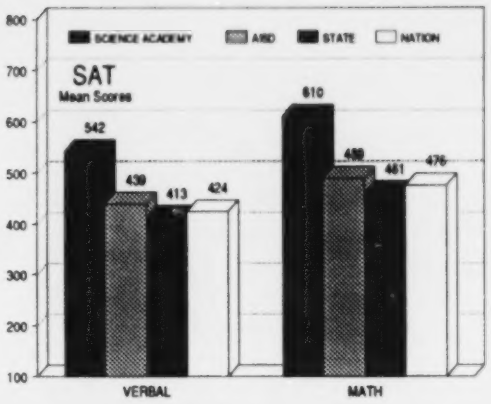
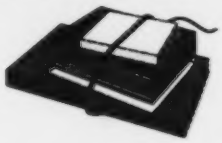
Science Academy Seniors Lead the Way with SAT Scores

According to figures reported by the College Entrance Examination Board, mean SAT scores for Science Academy students are well above those for AISD, as well as those for the State and the Nation.





Students Recognized for Academic Excellence

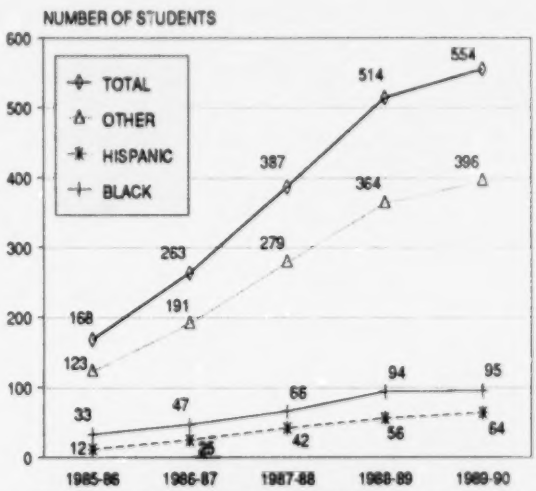
AISD has established an honors graduation program for students who desire a more rigorous academic program than is prescribed in the regular graduation plan. This program requires 24 credits from a prescribed list of courses and students must maintain an overall grade point average of 3.5 (92) or above. As illustrated in the figure below, the Science Academy has a high proportion of its enrolled seniors recognized for academic excellence. Of the 91 seniors at the Science Academy 32 (35%) *(Continued on page 3)*

	Science Academy		AISD Average	
	# of Seniors	% of Seniors Enrolled	# of Seniors	% of Seniors Enrolled
Academic Excellence Plan	32	35%	16	5%
Highest Honor	6	7%	6	2%
High Honor	6	7%	11	3%
Honor	11	12%	16	5%

Enrollment Continues to Increase

The Science Academy has been phased in one class at a time since 1985, with each grade level limited to approximately 200 students. In five years, enrollment has grown from 168 students in 1985-86 to 554 students in 1989-90, an increase of 230%. The graph below illustrates overall enrollment growth at the Science Academy over the last five years. Nonminority (Other) enrollment parallels overall enrollment growth at the Science Academy, increasing by 222% in five years.

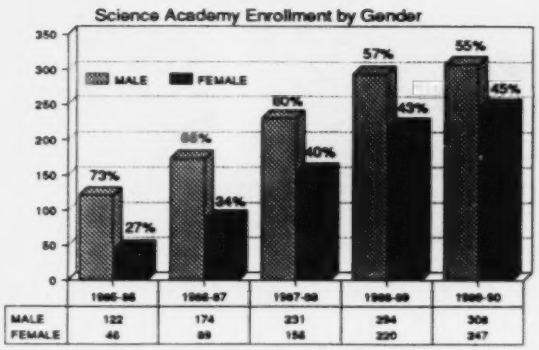
Hispanic enrollment has shown the greatest growth, increasing from 12 students (1985-86) to 64 students (1989-90), an increase of 433%. Black enrollment (while still greater than Hispanic enrollment in size) has grown from 33 students (1985-86) to 95 students (1989-90) an increase of 188%.



Note: Figures for 1985-89 computed from September enrollment, those for 1989-90 computed from January enrollment.

Female Enrollment at the Science Academy Reaches 45%

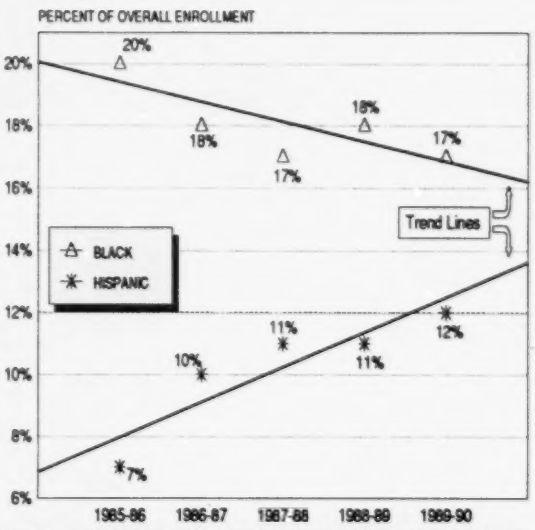
One of the important goals of the National Science Foundation (NSF) grant is to recruit and encourage minority and female interest in the sciences. At the Science Academy, while males remain in the majority, female enrollment (45%) is approaching the 50-50 distribution of AISD.



Recruitment Challenge for Science Academy

When minority enrollment patterns are examined as a percentage of overall enrollment, it is clear that Black student recruitment and retention pose a special challenge for the Science Academy. In 1985, 20% of the Academy students were Black; by 1990, this percentage had dropped to 17%. Hispanic students, on the other hand, made up 7% of the overall population in 1985. By 1990 this percentage had risen to 12%.

"...Black student recruitment and retention pose a special challenge for the Science Academy."

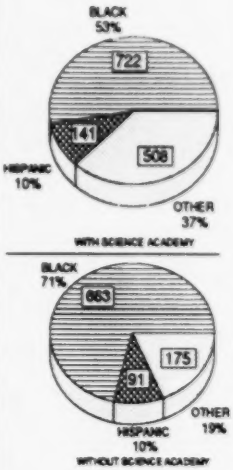


Note: Percentages for 1985-89 computed from September enrollment, 1989-90 computed from January enrollment.

(Continued from Page 2) graduated under the academic excellence plan. Both the Valedictorian and Salutatorian for the Class of 1990 were Science Academy students. The figure on page 2 shows the various honor categories and the percentage of seniors recognized from the Science Academy compared to the AISD average number of seniors per school in the same categories.

Science Academy Enrollment Impacts Ethnic Distribution at LBJ

The Science Academy with its large proportion of nonminority (Other) transfer students has resulted in a more balanced ethnic composition at LBJ High School. Without the Science Academy students that transferred from other schools, the ethnic composition of LBJ would be 71% Black, 10% Hispanic, and 19% Other. When Science Academy transfer students are included in this count, the percentage of Other students increases to 37%, the percentage of Black students decreases to 53%, and the percentage of Hispanic students remains 10%.



Science Academy Graduates Offered $1.2 Million in Scholarships

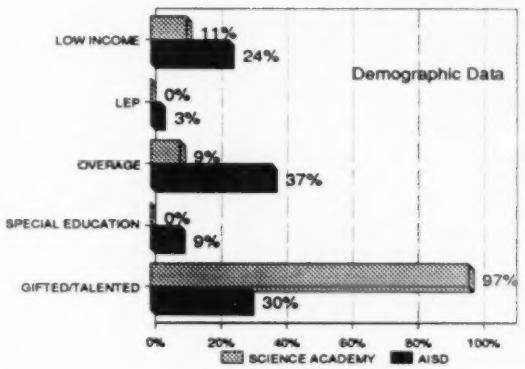
Science Academy graduates have been accepted to over 60 colleges nationwide, including Massachusetts Institute of Technology, Harvard, and Stanford. In addition, these students have been offered more than $1.2 million in scholarships. The colleges and universities that have accepted Science Academy graduates are:

Angelo State University
Auburn University
Barnard College
Boston College
Brown University
Concordia College
Cornell University
Dartmouth College
Drexel University
Duke University
Emory University
Fordham University
Georgia Technical Institute
Hampton University
Harvard University
Hollins College
Lamar University
Massachusetts Institute of Technology
Mount Holyoke College
New York University
Northwestern University
Pennsylvania State University
Prairie View A&M University
Purdue University
Rice University
Southern Methodist University
Southwest Texas State University
St. Edwards University
Stanford University
Syracuse University
Texas A&M University
Texas A&M University-Galveston
Texas Christian University
Texas Women's University
Trinity University
Union College
University of Alabama
University of Arizona
University of California-Berkeley
University of California-Los Angeles
University of Chicago
University of Dallas
University of Houston
University of Kansas
University of Kentucky
University of Oklahoma
University of Pennsylvania
University of Southern California
University of Texas-Arlington
University of Texas-Austin
University of Texas-El Paso
University of Texas-San Antonio
Utah State University
Vanderbilt University
Vassar University
Washington University
Webster University
Wellesley College

"Hispanic enrollment has shown the greatest growth..."

Gifted/Talented Students Predominate at the Science Academy

In 1989-90, the Science Academy had a much higher proportion (97%) of gifted students (defined by AISD as any student registered in an honors course), no limited English proficient (LEP) or special education students, and fewer lower income students (11%), than AISD as a whole.



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